

Astrobiology as a Context for High School Science Teachers' Professional Development

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The National Science Education Standards (NSES) include research-based standards for science teacher professional development. The standards can be summarized as learning about science content, pedagogical science content, the lifelong learning process, and coherency of professional development. The SETI Institute's NASA Astrobiology Institute (NAI) Lead Team Education and Public Outreach effort developed Astrobiology Summer Science Experience for Teachers (ASSET) in alignment with these standards. Astrobiology science talks, practice with *Voyages Through Time*[™] curriculum, an inquiry immersion experience, curriculum implementation planning, leadership skill development, and outreach planning are woven through the six-day workshop. The achievement of goals was measured by daily workshop evaluation and summative evaluation.

ASSET leverages the NAI EPO investment, reaching teachers, students and the general public. Astrobiology reaches the classroom via *Voyages Through Time* (VTT). VTT was developed by a SETI Institute partnership with NASA Ames Research Center, the California Academy of Sciences, and San Francisco State University with major funding from the NSF (Grant# 9730693), NASA, Hewlett Packard Company, Foundation for Microbiology, SETI Institute, and Educate America. VTT was successfully field-tested in 28 states and more than 90 high school classrooms across the U.S.A. As the participants, a blend of individuals and teams from nine states, complete at least two outreach activities in the next two years, they will contribute to the public understanding of astrobiology. The SETI Institute will support the ASSET network outreach efforts with materials and science speakers.

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